

A fourth track, see fig. 1, 4, passed through Franklin County, the tornado striking Decherd about 12:30 a. m., April 30, and apparently passing, with diminished violence, through Grundy and Meigs counties. Its track was about 2 miles wide at Decherd.

Each of these terrific disturbances was accompanied by the usual distinctive marks of the tornado—pendant funnel-shaped cloud, narrow path, destructive violence and scattering of debris in all directions.

Deaths were reported as follows: Giles County, 22; Lincoln County, 7; Williamson County, 8; Montgomery County, 4; Chester County, 4; Hickman County, 10; Franklin County, 4; Hardeman County, 1. The list is not complete for the State. A hundred or more people were reported injured, a number fatally. The property loss was estimated as follows: Giles County, \$100,000; Lincoln County, \$100,000; Montgomery County, about \$25,000; Williamson County, \$100,000; Chester County, about \$15,000; Shelby County, about \$150,000; Hickman County, \$150,000; Algood and vicinity, about \$10,000; Decherd and vicinity, about \$150,000; Bolivar and vicinity, about \$5,000. The losses are not all reported, and the amounts given are only approximately correct.—*H. C. Bate.*

#### TORNADOES IN MISSISSIPPI.

By W. S. BELDEN, Section Director.

On the evening of April 6 a tornado passed through the suburbs of Aberdeen, Miss., killing five persons, seriously injuring several others, and destroying considerable property.

At about 7:30 p. m. April 29 a tornado approximately one-half mile in width and moving in an easterly direction passed through the villages of Horn Lake and Plumpoint, which are located in the extreme northern portion of De Soto County, Miss. Six persons were killed by the storm, four or five injured, and the loss of property was heavy. This storm also did considerable damage in Tennessee.

#### SEVERE LOCAL STORM AT CLEVELAND, OHIO.

By JAMES KENEALY, Local Forecaster. Dated Cleveland, Ohio, May 22, 1909.

On the morning of April 21 the daily weather map showed a deep cyclonic trough extending from the Texas coast to Lake Superior, with the disturbance central near Springfield, Ill., where the barometer then stood at 29.40 inches. At 7 p. m. of that day the telegraphic reports showed the axis of the barometric trough to have advanced to a north-south line extending through Lakes Huron and Erie and the upper Ohio Valley, with the center of the depression located near Saugeen, Ontario, from which station a barometric reading of 29.24 inches was reported. The local storm at Cleveland occurred between noon and 1 p. m., in the southeast quadrant of the cyclone whose center was then passing northeastward near the southern border of Michigan. At Cleveland the day began with cloudy and threatening weather, light winds from the east, with the temperature stationary at 43° during the hours from midnight to 4 a. m., the morning minimum. The barometer fell slowly during the hours from midnight to 7 a. m., and the barograph showed a few slight oscillations in the pressure during that period. At 7 a. m. the temperature had risen to 46° and the wind had veered to southeast, increasing to a velocity of 20 miles per hour, with gradually diminishing pressure. Light rain began at 7:05 a. m. and ended at 9:30 a. m., the shower giving a total rainfall of 0.14 inch. A few rumbles of thunder were heard in the northeast about the time the shower ended. By 8 a. m. the temperature was beginning to rise quite rapidly, with fast diminishing pressure. The southeast wind steadily increased and a squall between 10 and 11 a. m. attained a velocity of 42 miles per hour for five minutes. From this time till noon the wind gradually decreased to moderate, with generally cloudy weather, though a few minutes of sunshine had followed the shower. The temperature

had risen from 43° at 4 a. m. to 51° at 9 a. m., reaching 68° at noon, its maximum for the day, while the barometer had fallen from 28.97 inches to 28.59 inches during the same interval.

At 12:25 p. m. a threatening cloud appeared in the southwest; at 12:30 p. m. there were a few vivid flashes of zigzag lightning and moderately heavy thunder in the west, and the sky darkened rapidly; at 12:31–12:34 the wind veered suddenly to southwest and west and, with a squall of hurricane force, came a very abrupt increase in pressure, rapidly falling temperature, a heavy downpour of rain, and some hail. The barometer rose 0.15 inch in about twenty minutes and the temperature fell from 68° to 46° in the same period of time. The fall of hail lasted about a minute, the hailstones were about the size of peas, and the precipitation from hail melted was estimated as 0.01 inch. As is common during the climax of severe thunderstorms, the darkness at this time was intense, and it continued so for three or four minutes. The wind reached its greatest violence during the three minutes that it was from the west, 12:31 to 12:34 p. m., and no doubt the greatest damage was done by this west wind. It blew at the rate of 72 miles per hour during the minute from 12:32 to 12:33 and 84 miles per hour during the minute from 12:33 to 12:34 p. m. The maximum 5-minute rate was 66 miles per hour, from 12:31 to 12:37 p. m. For the nine minutes, 12:31 to 12:40 p. m. the wind blew at the rate of 40 miles, or more, per hour. After this time the temperature and pressure conditions returned rapidly to those appropriate for their location with reference to the center of the cyclone, and the rain, which had begun at 12:22 p. m., finally ended at 2:14 p. m., with a total registered precipitation of 0.20 inch, most of which fell during the time of the squalls. The last thunder was heard in the northeast at 1:02 p. m. From 1 to 3 p. m. the winds were from southwest to south, brisk to moderate in force; by 2 p. m. the temperature had risen to 59°, and by 5 p. m. it had risen to 66°, with sunny weather. Later in the day moderate to brisk southwest winds veered to west, with a change to cooler, and the minimum temperature of the day, 42°, occurred at midnight, following the passage of the large cyclonic area to the northeastward.

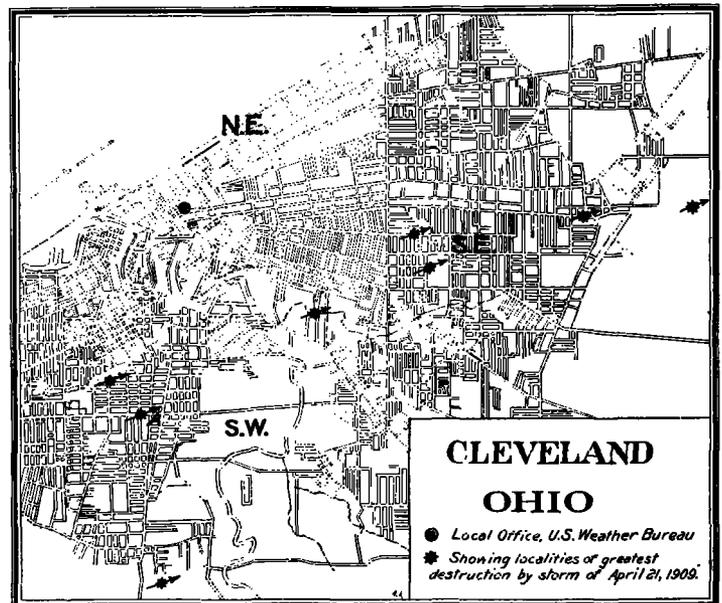


FIG. 1.—Path of storm through Cleveland, Ohio, April 21, 1909.

*Casualties and damage to property.*—Considering the number of persons killed and injured and the damage to property, the storm was the most disastrous that the city has ever suffered. Seven persons were killed by flying debris, collapsing build-